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10CED14 / 24

First / Second Semester B.E. Degree Examination, May / June 2012

COMPUTER AIDED ENGINEERING DRAWING

Time: 3 Hours

(COMMON TO ALL BRANCHES)

Max. Marks: 100

Note: 1. Answer three full questions
3. Draw to actual scale

2. Use A4 sheets supplied
4. Missing data, if any, may be suitably assumed

- 13 **Q1 a) i.** A point M is on HP and 30 mm in front of VP. Another point N is 20 mm below HP and 20 mm in front of VP. The distance between their projectors measured parallel to XY line is 50 mm. Find the distance between front views of the points M and N **(10 Marks)**
- 57 **ii.** A line has its end A 10 mm above HP and 15 mm in front of VP. The end B is 55 mm above HP and the line is inclined at 30° to HP and 35° to VP. The distance between end projectors is 50 mm. Draw the projections of the line. Determine the true length of the line and its inclination with VP. **(20 Marks)**

OR

- 149 **b)** A circular lamina inclined to VP appears in its front view as an ellipse of major axis 30 mm and minor axis 15 mm. the major axis is parallel to both HP and VP. One end of the minor axis is in both HP and VP. Draw the projections of the lamina and determine the inclination of the lamina with VP. **(30 Marks)**
- 164 **Q2.** A pentagonal prism 25 mm sides of base and 50 mm axis length is suspended freely from a corner of base. Draw the projections when the axis appears to be inclined to VP at 45° . **(40 Marks)**

- 250 **Q3 a)** A funnel is to be made of sheet metal. The funnel tapers from 60 mm to 30 mm diameter to a height of 25 mm and then forms a cylinder with a height of 50 mm. Bottom of the funnel is beveled off completely at an angle of 45° to the axis. Draw the development of the funnel. **(30 Marks)**

OR

- 259 **b)** A sphere of diameter 30 mm rests on the frustum of a hexagonal pyramid base 30 mm, top face 18 mm side and height 50 mm, such that their axis coincide. Draw the isometric projection of the combined solids **(30 Marks)**